

# **CLE Engineering**

## **Field Operations & Compliance Report**

# Sylmar Ground Return System Site Clearance

Pacific Palisades, California

Prepared for: California State Lands Commission

100 Howe Avenue, Suite 100 South

Sacramento, CA 95825-8202

Prepared by: CLE Engineering

10 Commercial Blvd., Ste. 100

Novato, CA 94949



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#### 1 SUMMARY

On July 23 and July 24, 2018, CLE Engineering performed a 400-KHz multibeam bathymetry and backscatter survey offshore Pacific Palisades to document seafloor conditions for future cable installation activities in the Santa Monica Basin.

The work was conducted aboard the 28-foot research vessel, *Orion*, out of Marina del Rey. All operations, including transits, took place during daylight hours. Mapping was completed using a Reson Seabat T50-R multibeam sonar, which was mounted on an over-the-side pole to the vessel. The vessel surveyed at speeds ranging from 4 knots to 6 knots.

While at sea, two sightings of wildlife were recorded – one sighting of four Pacific Common Dolphins and one sighting of a single California Sea Lion. The crew did not observe any abnormal behavior.

Figure 1 shows the locations of the survey tracklines and the locations of the two sightings.

#### 2 TRACKPLOT



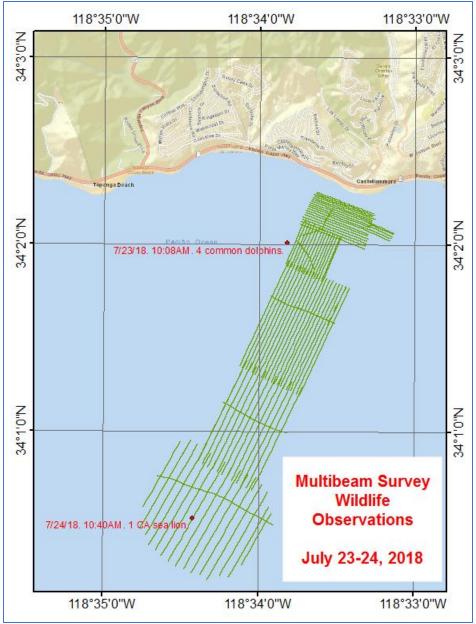


Figure 1. Tracklines and Wildlife Observations

#### 3 PROGRESS REPORT

The following table outlines the daily operations for the survey.

	Daily Progress Report: July 23, 2018
Time	Event
06:00	Survey crew and MMO meet at dock.



06:30	Vessel underway to site
07:30	Vessel begins survey operations
10:08	MMO: 4 Pacific Common Dolphins
15:30	Wind and seas build, degrading data quality. Vessel returns to Marina del Ray to perform patch test.
16:30	Vessel refuels for tomorrow: dock at Del Rey Landing - 18 gallons gasoline
17:15	Patch test calibration/ verification
18:30	Return to dock.

	Daily Progress Report: July 24, 2018							
Time	Event							
5:45	Survey crew and MMO meet at dock.							
6:00	Vessel underway to site							
7:00	Vessel begins survey operations							
10:40	MMO: 1 California Sea Lion							
14:30	Survey operations completed. Begin transit back to dock.							
16:00	Vessel at dock.							
18:25	Field QC completed. Confirmed no additional data required. Ready for demob.							

### 4 OBSERVATION LOG

The following observation log was compiled during vessel activities.



		(ph.ns	τ.			4 <b>7</b> 0 400000				20	
Monitor: Kim Matre	Comments	4 Pacific Commen dolphins	I california soa loan							Fage ∠ of ∠	10/24/2013
zitir.	Swell	44	44								
W	Sea State	454	+ + 4								
E	Wind	514 5-10	5w 10 kts								
Marine Environmental Variables Form	Visibility	Clear	10 Mi Clens								
ental Va	Glare	N/4	#/4								9
vironme	Cloud	clear	Clear								
arine En	Weather	73°	80.								
×	Vessel	Static	moltiberm								
34/2018	Longitude	10:08 34-2-0.6 118-33-49.6	10:40 N 0-31.9 W18-34-25.4								
Date: 7/23 - 7/24/2018	Latitude	34-2-0.6	34-0-31.9								
Date:	Time		04:01								<b>7.</b>
		7/23	1/24								



#### Marine Wildlife Observations Form

Date: 7/23 - 7/24 / 2018

Monitor: Kim Narcel

Time: 7/23/18 10:08 AM	Latitude: N 34-2-0.6	Longitude: ω //8 - 33 - 49.6
Weather: 73°	Cloud Cover: Clear	Glare: ~/ A
Visibility: clew - 10 mi	Wind Speed: 50 5-10 445	
Swell Height: 4 4	Survey Vessel Activity: ょねんと	- reviewine data
		A

Marine Wildlife Observations and Interactions:

4 common dolphins 300 yards southwest of vessel.

Vessel not moving. Dolphins moving away from vessel.

No distress observed. No action required.

Time: 7/24/18 10:40 AM	Latitude: א 34 - 0 - 31.9	Longitude: ω /18-34-25.4	
Weather: 80°	Cloud Cover: Clear	Glare: N/A	
Visibility: clear - 10 mi	Wind Speed: Sw 10 44s	Sea State: 4f+	
Swell Height: 4 ft	Survey Vessel Activity: multibeam survey line		

Marine Wildlife Observations and Interactions:

I california sea lion ~ 200 yards off vessel starboard bow. Sca lion was crossing bow, moving away from vessel. Sca lion submerged. Vessel slowed. No distress observed.

Page \_\_/\_ of \_\_/\_

v.1

7

10/24/2013

#### MITIGATION MONITORING PROGRAM EXHIBIT H



Effectiveness Criteria
1
certification of vessel engines.
- 7/.
activities are emissions data to
assess compliance, determine if changes





					Mitigat	ion Monito	Mitigation Monitoring Program
Mitigation Measure (MM)	Location and Scope of Mitigation	of Mitigation	Effectiveness Criteria	Monitoring or Reporting Action	Responsible Party	Timing	Implementation Date(s) and Initials
	Equipment Type	Safety Zone (radius, m)					
	Single Beam Echosounder	20					
	Multibeam Echosounder	200					
	Side-Scan Sonar	900					
	Subbottom Profiler Boomer System	100					
	If the geophysical survey equipment is operated at or above a frequency of 200 kilohertz (kHz), safety zone monitoring and enforcement is not required; however, if geophysical survey equipment operated at a frequency at geophysical survey equipment operated at a frequency at or above 200 kHz is used simultaneously with geophysical survey equipment less than 200 kHz, then the safety zone for the equipment less than 200 kHz, then the specified safety zone and may be negatively affected by survey activities. The MWMs shall have authority to recommend continuation (or cessation) of operations to recommend continuation (or cessation) of operations during periods of limited visbility (i.e., fog. rain) based on the observed abundance of marine wildlife. Periodic reevaluation of weather conditions and reassessment of the continuation/cessation recommendation shall be completed by the onboard MMMs. During operations, if an animal's actions are observed to be irregular, the monitor shall have authority to recommend that equipment be shut down until the animal moves further away from the sound source. If irregular behavior is observed, the equipment shall be shut-off and will be restarted and ramped-up to full power, as applicable, or will not be started until the animal(s) is/are outside of the safety zone or have not been observed for 15 minutes.	to (kHz), safety zone at required; however, if required; however, if neously with set than 200 kHz, then tess than 200 kHz, then the so beerved within the sobserved wildlife. Periodic shall also have an eastersesment of mendation shall be se. S. During operations, if to be irregular, the commend that eanimal moves further irregular behavior is esthut-off and will be cower, as applicable, or served for 15 minutes.	# # E-> c				
	For nearshore survey operations utilizing vessels that lack the personnel capacity to hold two (2) MWMs aboard during survey operations, at least twenty-one (21) days prior to the commencement of survey activities, the Permittee may petition the CSLC to conduct survey operations with one (1) MWM aboard. The CSLC will	s utilizing vessels that la wo (2) MVM/s aboard st wenty-one (21) days urvey activities, the 5 to conduct survey board. The CSLC will	¥ 3				



Mitigation Monitoring Program	Implementation Timing Date(s) and Initials		Approval required before survey is initiated. 1/23 - 24 / 1/8 Monitoring comple-tion of survey.	diately prior to 7/23 - 24 / 2018
Mitigatio	Responsible Party		OGPP permit holder.	OGPP permit Imme holder. diately prior to survey
	Monitoring or Reporting Action	2	Presurvey request for nighttime operations, including equipment specifications and proposed use schedule.  Document equipment use.  Submit Final Monitoring Report after completion of survey activities.	No adverse Compilance with effects to permit requirements marine (observers); mammals or compilance with safe sea turtles due start procedures. to survey activities are Monitoring Report affer completion of survey activities.
	Effectiveness Criteria		No adverse effects to marine mammals or sea furfles due to survey activities are observed.	No adverse effects to marine mammals or sea furtles due to survey activities are observed.
	Location and Scope of Mitigation	factors the CSLC will consider will include the timing, type, and location of the survey, the size of the vessel, and the availability of alternate vessels for conducting the proposed survey. CSLC authorizations under this subsection will be limited to individual surveys and under any such authorization; the Permittee shall update the MWCP to reflect how survey operations will occur under the authorization.	All State waters; nighttime survey operations are prohibited under the OGPP, except as provided below. The CSLC will consider the use of single beam cashozounders and passive equipment types at night on a case-by-case basis, taking into consideration the equipment specifications, location, timing, and duration of survey activity.	All State waters; the survey operator shall use a "soft start" technique at the beginning of survey activities each day (or following a shut down) to allow any marine mammal that may be in the immediate area to leave before the sound sources reach full energy. Surveys shall not commence at nighttime or when the safety zone cannot be effectively monitored. Operators shall initiate each piece of equipment at the lowest practical sound level, increasing output in such a manner as to increase in steps not exceeding approximately 6 decibeis (dB) per 5-minute period. During ramp-up, the Marine Wildlife Monitors (MWMs) shall monitor the safety zone. If marine mammals are sighted within or about to enter the safety zone, a power-down or shut down shall be implemented as though the equipment was operating at full power. Initiation of ramp-up procedures from shut down requires
	Mitigation Measure (MM)		MM BIO-4: Limits on Nighttime OGPP Surveys.	Start.



	Mitigation Monitoring Program	Implementation Date(s) and Initials	<u>5</u>	7/23/18
	tion Monit	Timing	firmediately prior to and during and during survey.	Monitoring Report following comple- tion of survey.
	Mitiga	Responsible Party	OGPP permit holder.	OGPP permit Monitoring holder. Report following completion of survey.
		Monitoring or Reporting Action	Document initial and during survey equipment settings. Submit Final Monitoring Report after completion of survey activities.	Document pinniped reactions to vessel presence and equipment use. Submit Final Monitoring Report after completion of survey activities.
EXHIBIT H		Effectiveness Criteria	No adverse Document ini effects to during survey marinals or sea turtles due Submit Final to survey Admitoring R activities are after complet observed. survey activit	No adverse effects to pinnipeds at haul outs are observed.
EXH		Location and Scope of Mitigation	All State waters; geophysical operators shall follow, to the maximum extent possible, the guidelines of Zykov (2013) as they pertain to the use of subboltom profilers and sidescan sonar, including:  • Using the highest frequency band possible for the subboltom profiler;  • Using the shortest possible pulse length; and  • Lowering the pulse rate (pings per second) as much as feasible.  Geophysical operators shall consider the potential applicability of these measures to other equipment types (e.g., borner). Permit holders will conduct routine inspection and maintenance of acoustic-generating equipment to ensure that low energy geophysical equipment used during permitted survey activities remains in proper working order and within manufacturer's equipment specifications. Verification of the date and occurrence of such equipment inspection and maintenance shall be provided in the required	
		Mitigation Measure (MM)	MM BIO-6: Practical Limitations on Equipment Use and Adherence to Equipment Manufacturer's Routine Schedule.	MM BIO-7: Avoidance of Pinniped Haul-Out Sites.



Location and Scope of Mitigation  All State waters; if a collision with marine manmal or conditions under which the accident occurred, including marine manmal or conditions under which the accident occurred, including marine manmals or survey activities.  • Vessel location (latitude, longitude) when the collision; and the and the accident occurred, including marine marine marine occurred;  • Speeds location (latitude, longitude) when the collision; ose turthes due occurred;  • Observations on difficulty, visibility in miles or kilometers, and presence of rain or fog) at the time of collision;  • Species of marine wildlife contacted (if known);  • Whether an observer was monitoring marine wildlife at the time of collision; and, and presence of marine wildlife contacted (if known);  • Name of vessel vessel owner/operator, and captain officer in charge of the vessel at time of collision.  • Aneme of vessel vessel owner/operator, and captain officer in charge of the vessel at time of collision.  • Aneme of vessel vessel owner/operator, and captain officer in charge of the vessel at time of collision.  • Aneme of vessel vessel owner/operator, and captain officer in charge of the vessel at time of collision, the vessel shall shop. If safe to do so; however, the vessel is not obligated to stand by and may proceed after confirming that it will numediately report the incident. Consistent with Marine Mammal Protection After appropriate. From the vessel's base of operations on officer in charge of the operations on operations. I alephone and of marine mammal expensely because the coordinator will coordinate subsequent action, including enisiting the animite mammals in both State and experience. Althrough NOAA has primary responsibility for marine mammals in both State and federal waters in both and visional Marine rishering and of marine mammals in both State and federal waters in both say visional mammal processer. The operations and subsequent of Fish and instructions. Althrough NOAA has primary and processed and succes
All State waters: if a collision with marine mammal or reptile occurs, the vessel operator shall document the conditions under which the accident occurred, including the following:  • Vessel location (latitude, longitude) when the collision is occurred;  • Date and time of collision;  • Observation conditions (e.g., wind speed and direction, swell height, visibility in miles or kilometers, and presence of rain or fog) at the time of collision;  • Whether an observer was monitoring marine wildlife at the time of collision; and, at the time of collision; and, whether an observer was monitoring marine wildlife at the time of collision; and, heaves of rain or fog) at the time of collision.  • Name of vessel, vessel owner/operator, and captain officer in charge of the vessel stall stop, if safe to do so; however, the vessels is not obligated to stand by and may proceed after confirming that it will not further damage the animal by doing so. The vessel will then immediately report the incident. Consistent with Marine Mammal Protection Act requirements, the vessel's base of operations, and shall immediately report the incident. Consistent with Marine Mammal Protection Act requirements, the vessel's base of operations. From the vessel's base of operations, and shall immediately captain including enlisting the aid of marine mammal rescue organizations, if appropriate. From the vessel's base of operations. Stranding Coordinator will coordinate subsequent action, including enlisting the aid of marine mammals in both Stranding Coordinator. NOAA National Marine Fisheries Sternding Coordinator. No Act Region Long Beach, to obtain instructions. Atthough NOAA has primary responsibility for marine and beginnin



				Mitigat	ion Monit	Mitigation Monitoring Program
Mitigation Measure (MM)	Location and Scope of Mitigation	Effectiveness Criteria	Monitoring or Reporting Action	Responsible Party	Timing	Implementation Date(s) and Initials
MM BIO-9: Limitations on Survey Operations in Select Marine Protected Areas (MPAs).	All MPAs; prior to commencing survey activities, geophysical operators shall coordinate with the CLSC, California Department of Fish and Wildlife (CDFW), and any other appropriate permitting agency regarding proposed operations within MPAs. The scope and purpose of each survey proposed within a MPAs shall be defined by the permit holder, and the applicability of the survey to the allowable MPA activities shall be defineated by the permit holder. If deemed necessary by CDFW, geophysical operators will pursue a scientific collecting permit, or other appropriate authorization, to secure appropriate authorization, to secure approval to work within a MPA, and shall provide a copy of such authorization to the CSLC as part of the required presurvey notification to CSLC. CSLC, CDFW, and/or other permitting agencies may impose further restrictions	No adverse effects to MPA resources due to survey activities are observed.	Monitor reactions of wildlife to survey operations; report on shutdown conditions and survey restart. Submit Final Monitoring Report after completion of survey activities.	OGPP permit Prior to holder; survey. survey. cDFW.	survey.	41×
MM HAZ-1: Oil Spill Contingency Plan (OSCP) Required Information.	Permittees shall develop and submit to CSLC staff for review and approval an OSCP that addresses accidental releases of petroleum and/or non-petroleum products during survey operations. Permittees' OSCPs shall include the following information for each vessel to be involved with the survey:  • Specific steps to be taken in the event of a spill, including notification names, phone numbers, and locations of: (1) nearby emergency medical facilities, and (2) wildlife rescuel/response organizations (e.g., Oiled Wildlife rescuel/response organizations (e.g., Oiled Wildlife rescuel/response organizations (e.g., Description of crew training and equipment testing procedures; and  • Description, quantities, and location of spill response equipment choard the vessel.	Reduction in the potential for an accidental spill. Proper and timely response and undification of responsible parties in the event of a spill.	Documentation of OGPP pe proper spill training. holder an contract Notification of vessel responsible parties in operator. the event of a spill.	OGPP permit Prior to holder and survey. contract vessel operator.	Prior to survey.	CE 7/10/18
MM HAZ-2: Vessel fueling restrictions.	Vessel fueling shall only occur at an approved docking facility. No cross vessel fueling shall be allowed.	Reduction in the potential for an accidental spill.	Documentation of fueling activities.	Contract vessel operator.	Following survey.	7/23/18
MM HAZ-3: OSCP equipment and supplies.	Onboard spill response equipment and supplies shall be sufficient to contain and recover the worst-case scenario spill of petroleum products as outlined in the OSCP.	Proper and timely response in the event of a soill	Notification to CSLC of onboard spill response equipment/supplies inventory, verify	Contract vessel operator.	Prior to survey.	7/22/18



				Mitigat	ion Monit	Mitigation Monitoring Program
Mitigation Measure (MM)	Location and Scope of Mitigation	Effectiveness Criteria	Monitoring or Reporting Action	Responsible Party	Timing	Implementation Date(s) and Initials
			ability to respond to worst-case spill.			
MM HAZ-1: Oil Spill Contingency Plan (OSCP) Required	Outlined under Hazards and Hazardous Materials (above)	2				CE 7/10/18
MM HAZ-2: Vessel fueling restrictions.	Outlined under Hazards and Hazardous Materials (above)	(1)				CE 128/18
MM HAZ-3: OSCP equipment and supplies.	Outlined under Hazards and Hazardous Materials (above)	6				* 12
MM BIO-9: Limitations on Survey Operations in Select MPAs	Outlined under Biological Resources (above)					Ald
MM REC-1: U.S. Coast Guard (USCG), Harbornaster, and Dive Shop Operator Notification.	All California waters where recreational diving may occur. No adverse as a survey permit condition, the CSLC shall require Permittees to provide the USCG with survey details, including information or vessel types, survey locations, divers from times, contact information, and other details of activities what may pose a hazard to divers so that USCG can include the information in the Local Notice to Mariners, advising vessels to avoid potential hazards near survey areas. Furthermore, at least twenty-one (21) days in areas. Furthermore, at least twenty-one (21) days in advance of in-water activities, Permittees shall: (1) post such notices in the harbomasters' offices of regional harbors; and (2) notify operators of dive shops in coastal locations adjacent to the proposed offshore survey	No adverse effects to recreational divers from survey operations.	Notify the USCG, local harbomasters, and local dive shops of planned survey activity.  Submit Final Monitoring Report after completion of survey activities.	OGPP permit Prior to holder.	Prior to survey.	7/10/18



**EXHIBIT H** 

				Mittgat	ION INOUN	Mingaron Montoling Flogran
Mitigation Measure (MM)	Location and Scope of Mitigation	Effectiveness Criteria	Monitoring or Reporting Action	Responsible Party	Timing	Implementation Date(s) and Initials
MM FISH-1: U.S. Coast Guard (USCG) and Harbormaster Notification.	All California waters; as a survey permit condition, the CSLC shall require Permittees to provide the USCG with survey details, including information on vessel types, survey locations, times, contact information, and other details of activities that may pose a hazard to mariners and fishers so that USCG can include the information in the Local Notice to Mariners, advising vessels to avoid potential hazards near survey areas. Furthermore, at least twenty-one (21) days in advance of in-water activities, Permittees shall post such notices in the harbormasters' offices of regional harbors.	No adverse effects to commercial fishing gear in place.	Notify the USCG and OGPP permit Prior to local harbormasters holder. of planned survey activity. Submit Final Monitoring Report after completion of survey activities.	OGPP permit holder.	Prior to survey.	7/10/18
MM FISH-2: Minimize Interaction with Fishing Gear.	To minimize interaction with fishing gear that may be present within a survey area: (1) the geophysical vessel (or designated vessel) shall traverse the proposed survey corridor prior to commencing survey operations to note and record the presence, type, and location of deployed fishing gear (i.e., buoys); (2) no survey lines within 30 m (100 feet) of observed fishing gear shall be conducted. The survey crew shall not remove or relocate any fishing gear; removal or relocation shall only be accomplished by the owner of the gear upon notification by the survey operator of the potential conflict.	No adverse effects to commercial fishing gear in place.	Visually observe the survey area for commercial fishing gear. Notify the gear relocation of gear outside survey area. Submit Final Monitoring Report affer completion of survey activities.	OGPP permit holder.	Immediately prior to prior to survey (prior to each survey day).	7/125-24/18
MM FISH-1: USCG and Harbormaster Notification	Outlined under Commercial and Recreational Fisheries (above)					81/01/L 37

Acronyms/Abbreviations: CARB = California Air Resources Board; CDFW = California Department of Fish and Wildlife; CSLC = California State Lands Commission; dB = decibals; kHz = kilohertz; MPA = Marine Protected Area; MWCP = Marine Wildlife Contingency Plan; MWM = Marine Wildlife Monitor; meter(s); NOA = National Oceanic and Atmospheric Administration; NO<sub>x</sub> = Nitrogen Oxide; OGPP = Offshore Geophysical Permit Program; OSCP = Oil Spill Contingency Plan; USCG = U.S. Coast Guard